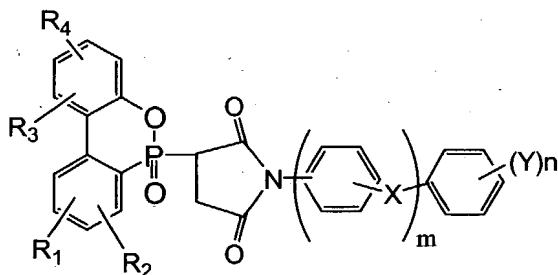


## Abstract

A phosphorus containing compound having the following structure is disclosed, which can be blended a resin or reacted with a compound to form a flame retardant resin:



wherein  $R_1$ - $R_4$  independently are H or  $C_1$ - $C_4$  alkyl; X is a single bond,

$-CH_2-$ ,  $-C(CH_3)_2-$ ,  $-\overset{O}{\parallel}C-O-$ ,  $-\overset{O}{\parallel}C-O-$ ,  $-O-$ ,  $-S-$ ,  $-SO_2-$ ; Y is H,  $C_1$ - $C_4$  alkyl,

$-OH$ ,  $-NH_2$ ,  $-NO_2$ ,  $-COOH$ ,  $-CHO$ , or  $-\overset{O}{\parallel}CH_2CHCH_2$ ; m is integer of 0-2; and n is an integer of 1-4.